

Application No. 10/613,613
Amendment dated: April 14, 2006
Response dated: September 14, 2006

Docket No.: 101328-0176

AMENDMENTS TO THE DRAWINGS

The attached Replacement Sheets replace Figures 1-15B.

REMARKS

The pending Office Action addresses claims 1-41, rejecting claims 11-18. Claims 1-10 and 19-41 are withdrawn from consideration.

Amendments to the Specification

Applicant amends the specification to correct typographical errors. No new subject matter is added.

Amendments to the Drawings

The Examiner objects to the drawings as failing to comply with 37 C.F.R. 1.121(d). Applicant submits new drawings in compliance with 37 C.F.R. 1.121(d).

Amendments to the Claims

Applicant amends independent claim 11 to correct typographical errors and to specify that the object tips when the angle θ between the z and z_l axes is greater than zero. Support for the amendment can be found throughout the specification, for example, at page 10, lines 1-2. Applicant also amends claims 12 and 13 to correct typographical errors. Claim 13 is also amended to recite “to be about” in place of “in the vicinity of”. No new matter is added.

Rejections Pursuant to 35 U.S.C. §112

The Examiner rejects claims 11-18 pursuant to 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully disagrees.

The Examiner asserts that the scope of independent claim 11 is indefinite because there is “no mention of what direction the tipping occurs in and what is meant by the term ‘stability’.” Applicant amends claim 11 to clarify that the object tips when the angle θ between the z and z_l axes is greater than zero thereby obviating this rejection.

The Examiner asserts that there is insufficient antecedent basis for “the luggage”

limitation in claims 12 and 13. Applicant amends claims 12 and 13 to recite “the wheeled object” in place of “the luggage” thereby obviating the basis for this rejection.

The Examiner also asserts that the scope of claim 13 is indefinite as a result of “the ‘usual’ pitch angle” and “fudge factor” limitations. Applicant respectfully disagrees. The “usual pitch angle” and “fudge factor” limitations are clearly explained on page 11, lines 8-11 and 17-22 of the specification as limitations that vary with the specific dimensions of the wheeled object. Accordingly, the scope of claim 13 is not indefinite to a person having ordinary skill in the art.

The Examiner further asserts that the term “in the vicinity of” renders the scope of claim 13 indefinite. Claim 13 is amended to recite “to be about” in place of “in the vicinity of.” The Federal Circuit has made it clear that the term “about” is not indefinite and that a person having ordinary skill in the art will readily understand the meaning of this term. For example, in *Chemical Separation Technology Inc. v. United States*, 51 Fed. Cl. 771, 782-783 (Fed. Cir. 2002), the Federal Circuit held that the use of the language “a pH of about 5” “does not render the claim here indefinite, as illustrated by the fact that the Federal Circuit has, on several occasions, construed the scope of a range of “about” numbers in determining whether a patent was infringed.” The Court cited various cases that have held that claims employing the term “about” are definite. *See, e.g., Zoltek Corp.*, 48 Fed. Cl. at 300; *see also Eiselstein v. Frank*, 52 F.3d 1035, 1040 (Fed. Cir. 1995) (“the meaning of the word ‘about’ is dependent on the facts of a case, the nature of the invention, and the knowledge imparted by the totality of the earlier disclosure to those skilled in the art”); *Modine Mfg. Co. v. United States Int’l Trade Comm’n*, 75 F.3d 1545, 1554 (Fed. Cir. 1996) (“Although it is rarely feasible to attach a precise limit to ‘about’ the usage can usually be understood in light of the technology embodied in the invention.”), *cert. denied*, 518 U.S. 1005 (1996); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1557 (Fed. Cir. 1983) (descriptive term “about,” when used to describe ranges in a patent, does not render a claim indefinite), *cert. denied*, 469 U.S. 851 (1984); *CPC International Inc. v. Archer Daniels Midland Co.*, 831 F. Supp. 1091, 1110 (D. Del. 1993) (“In the context of determining an appropriate tip speed for a particular vessel and agitator, a person skilled in the art would not find the term ‘about 600 cm/sec’ to be unclear.”), *aff’d*, 31 F.3d 1176 (Fed. Cir.

1994), *cert. denied*, 513 U.S. 1184, 130 L. Ed. 2d 1129, 115 S. Ct. 1176 (1995); *Zoltek Corp. v. United States*, 48 Fed. Cl. 290, 300 (Fed. Cl. 2000) (“The Court does not agree with Defendant’s contention that a precise limit must always be attached to the term ‘about.’”); *Syntex (U.S.A.), Inc. v. Paragon Optical Inc.*, 1987 U.S. Dist. LEXIS 14544, 7 U.S.P.Q.2D (BNA) 1001, 1038 (D. Ariz. 1987) (“‘About’ is not broad or arbitrary but rather is a flexible term with a meaning similar to ‘approximately.’”).

In claim 13, the term “about” precedes a numerical quantity (i.e., the value of the angle ξ) and is included so as to avoid unnecessarily strict numerical boundaries. A person of ordinary skill in the art would understand the proper limitations when examined in the context of this technology. Therefore, the term “about” is not indefinite and withdrawal of the objection is respectfully requested.

The Examiner also asserts that the use of the term “about” renders the scope of claims 14 and 15 indefinite. As explained above, the term “about” is not indefinite and withdrawal of the rejections is respectfully requested.

Claim Rejections Pursuant to 35 U.S.C. §103

The Examiner rejects claims 11-18 as being obvious over U.S. Patent No. 7,004,481 to Stanish (“Stanish”) in view of U.S. Patent No. 5,826,895 to Bradfield (“Bradfield”). Applicant respectfully disagrees. The Examiner asserts that Stanish teaches the claimed invention except for the canting of the secondary wheel assembly about the vertical axis. The Examiner thus relies on Bradfield arguing that it would have been obvious to one having ordinary skill in the art to modify the wheeled object shown by Stanish with the secondary wheel assembly configuration as taught by Bradfield. Applicant respectfully disagrees.

Independent claim 11 recites a passively stabilized wheeled object having an object body, at least one primary wheel assembly, and at least one secondary wheel assembly defined by a cant axis that is configured to *restore stability* if the object tips. Stanish and Bradfield both fail to teach or even suggest a wheeled object having a secondary wheel with such a configuration. Stanish teaches a wheeled utility bag that includes extendable axles that support at least one

rotatable wheel. As acknowledged by the Examiner, Stanish fails to disclose the canting of a secondary wheel assembly about a vertical axis. Bradfield fails to remedy the deficiencies of Stanish because Bradfield also fails to teach or suggest a wheeled object having a secondary wheel assembly that is configured to *restore stability* if the object tips. Bradfield discloses a skateboard that has a plurality of in-line wheels rotatably mounted on a front end of the board and rear wheels disposed on either side of a rear end of the board. The Examiner asserts that the rear wheels (244, 250, 252) are defined by a cant axis that is chosen to restore stability if the object tips. While the wheels (244, 250, 252) may be disposed at an angle with respect to the board (specifically, along the circumference of a curve), they are not mounted to *restore stability* if the board tips. As explained by Bradfield at col. 5, lines 21-27, the wheels (244, 250, 252) are configured such that the skateboard (200) may be *steered* by tilting the board (212). Bradfield goes on to explain that the outer rear wheels (244) provide a greater degree of turn than the intermediate wheels (246), and the central wheel (242) is aligned with the in-line wheel assembly (218) so that the skateboard (200) will travel in a straight line when it is not tilted. In other words, the rear wheels (244, 250, 252) do not act to *restore stability* to the skateboard (i.e., return the skateboard to a balanced position) – the rear wheels (244, 250, 252) merely facilitate *steering*. It is the skateboard rider himself that restores the stability of the board by shifting his weight – not the configuration of the rear wheel assembly about any cant axis, as required by independent claim 11.

Moreover, one having ordinary skill in the art would have no motivation to combine Stanish and Bradfield. The strongest rational for combining references is a recognition that some advantage of expected beneficial result would be produced by the combination. (See MPEP §2144). There is no advantage to modifying the wheeled object of Stanish to include the secondary wheel assembly configuration as taught by Bradfield because Stanish already discloses features specifically designed to enhance stability. As explained by Stanish at col. 5, lines 36-39, “When in an extended position, axles 36, 38 provide a wider stance that helps to stabilize utility bag 10 and prevents tip overs that could damage expensive equipment.” Since Stanish specifically discloses extendable axles for stabilizing the bag (10), there is no need to modify Stanish to include an angled wheel assembly, as taught by Bradfield.

Even further, modifying Stanish to include a cant axis may render the device unsatisfactory for its intended purpose. As explained above, Stanish teaches *extendable axles* (36, 38). The extendable axles (36, 38) are *slidably disposed within axle cylinder* (30) and are adapted to be adjustably secured in multiple positions to allow for both wide and narrow stances. Modifying the extendable axles (36, 38) to include a cant axis would alter the alignment of the axles (36, 38) with respect to the axle cylinder (30) thereby prohibiting the sliding engagement between the axles (36, 38) and the cylinder (30). Thus, the proposed modification would render the Stanish device unsatisfactory for its intended purpose because the extendable axles (36, 38) would no longer be extendable.

An Examiner may only establish a prima facie case of obviousness when “the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993). In asserting that the prior art “suggested” the claimed subject matter, however, an Examiner must realize that “the mere fact that the prior art may be modified in the manner proposed by the Examiner neither makes the modification prima facie obvious nor obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992).

Applicant was motivated by problems discovered, and which were not recognized by Stanish or Bradfield, to develop a unique configuration for restoring stability in a wheeled object. Neither Stanish nor Bradfield teach or even suggest the claimed invention. The Examiner’s picking and choosing of features out of context from two different references in an attempt to construct a prima facie obviousness rejection boils down to an impermissible hindsight reconstruction of Applicant’s invention.

Accordingly, independent claim 11, as well as claims 12-18 which depend directly or indirectly therefrom, distinguish over Stanish and Bradfield, taken alone or combined, and therefore represent allowable subject matter.

Rejoinder

Applicant requests that claim 19 be rejoined, as it depends from independent claim 11 and is also directed to a wheeled object. Applicant also requests the rejoinder of claims 1-10 and 32-41. The Examiner asserts that claims 1-10 and 32-41 are directed to luggage and claims 11-20 are directed to a wheeled object. However, luggage is one type of wheeled object, and thus the claims are clearly *related*. Since luggage is, indeed, a type of object one could argue that the terms luggage and object can be used interchangeably. In addition, examining claims 11-20 and claims 1-10 and 32-41 together would not be burdensome because all the claims are directed to wheeled objects.

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Conclusion

In conclusion, Applicants submit that claims 11-18 are now in condition for allowance, and allowance thereof is respectfully requested. The Examiner is encouraged to telephone the undersigned attorney for Applicants if such communication is deemed to expedite prosecution of this application.

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Respectfully submitted,

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